

Title (en)  
Printed-wiring board

Title (de)  
Gedruckte Leiterplatte

Title (fr)  
Panneau à circuit imprimé

Publication  
**EP 1098555 A3 20050413 (EN)**

Application  
**EP 00309666 A 20001101**

Priority

- JP 31296399 A 19991102
- JP 2000292146 A 20000926

Abstract (en)  
[origin: EP1098555A2] A printed wiring board having assembled thereon a grid array type package, a multi-terminal device with many terminals arranged in matrix, is provided, through first signal connection holes, signal lines, and second connection holes, with many numbers of lands divided into plural blocks, being arranged in matrix on a first layer to connect each terminal of the multi-terminal device correspondingly, signal line patterns connected with many lands, and drawn out in the same direction per block, and first signal patterns from lands positioned on the innermost line of many lands. Then, the wiring patterns of the signal lines are drawn out regularly from many lands formed in matrix on the assembling surface of the grid array type package to make it easier for the printed wiring board to effectuate wiring connections without making them complicated or increasing the number of layers of the printed wiring board. Also, with the provision of ground patterns that surround signal lines, it is made possible to reduce unwanted radiation, as well as to suppress the occurrence of malfunctions of electronic equipment due to reflections and ground bounces. <IMAGE>

IPC 1-7  
**H05K 1/11**

IPC 8 full level  
**H05K 1/11** (2006.01)

CPC (source: EP US)  
**H05K 1/112** (2013.01 - EP US); **H05K 2201/09227** (2013.01 - EP US); **H05K 2201/09336** (2013.01 - EP US); **H05K 2201/0939** (2013.01 - EP US); **H05K 2201/09627** (2013.01 - EP US); **H05K 2201/10734** (2013.01 - EP US)

Citation (search report)

- [Y] EP 0921567 A2 19990609 - SHINKO ELECTRIC IND CO [JP]
- [Y] US 5955704 A 19990921 - JONES LEROY [US], et al
- [Y] US 4912603 A 19900327 - SEYAMA KIYOTAKA [JP]
- [Y] US 5859474 A 19990112 - DORDI YEZDI N [US]

Cited by  
US7319269B2; CN1331222C; US8125087B2; US6677781B2; WO2004032234A3; WO2067325A3; WO2004061960A3; US7005736B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1098555 A2 20010509; EP 1098555 A3 20050413; EP 1098555 B1 20080723**; CN 1196385 C 20050406; CN 1297323 A 20010530; DE 60039569 D1 20080904; US 6489574 B1 20021203

DOCDB simple family (application)  
**EP 00309666 A 20001101**; CN 00133730 A 20001102; DE 60039569 T 20001101; US 70276300 A 20001101